

REMARKS

Claims

Claims 1-23 and 39 have been examined and are all the claims pending in the application. The Examiner contends that the Applicants' arguments filed on July 21st, 2006 are not persuasive. Hence, the Examiner maintains the same grounds for rejection.

Allowable Subject Matter

The Examiner continues to acknowledge that claims 17-23 contain allowable subject matter and would be patentable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicants thank the Examiner for acknowledging that claims 17-23 contain allowable subject matter. However, Applicants respectfully request that the Examiner hold in abeyance such rewriting until the Examiner has had an opportunity to reconsider (and withdraw) the prior art rejection of the other claims.

Claim Rejections – 35 U.S.C. § 102

Claims 1-16, and 39 are rejected under 35 U.S.C. § 102(b) as being anticipated by US Patent No. 5,790,165 to Kuboki *et al* ("Kuboki"). At least for the following reasons, Applicants respectfully traverse the rejection.

Claim 1

Applicants submit claim 1 is patentable over Kuboki. For example, claim 1 recites a method of driving a liquid crystal display device comprising, among other things, supplying a source driver circuit with branched plural-systems image data in synchronization with at least one clock signal having a clock frequency that is less than half of said original data rate.

In Applicants' amendment filed on July 21st, 2006 in response to the previous Office Action of March 21st, 2006, Applicants argued that Kuboki does not disclose a method of driving a liquid crystal display, and the Applicants further argued that Kuboki does not disclose that a source driver circuit is supplied with branched plural-systems image data, and that Kuboki does not disclose branching plural-systems image data into gray-scale voltage signals.

In the Examiner's response to the Applicants' arguments, the Examiner contends that Kuboki, in Columns 15-16, lines 50-40, recites and discloses a method of driving a liquid crystal display device. Applicants note that the Examiner did not respond to Applicants' additional arguments with respect to Kuboki not disclosing that a source driver circuit is being supplied with branched plural-systems image data , and also, Kuboki not disclosing that the source driver circuit is allowed to further branch the branched plural-systems image data into gray-scale voltage signals.

In the portions of Kuboki cited by the Examiner which allegedly recite and disclose a method of driving a liquid crystal display device, Kuboki discloses that "[t]he control unit 3111 is operated according to an input instruction from an operation unit 3010 and digitizer 3114 in a case where the subject apparatus is operated as a color copying machine." (Kuboki, Figure 15, Column 15, lines 60-63). And "[t]he operation unit 3010 has a display formed by a liquid crystal display (LCD display) and a touch panel made of a transparent electrode located on the surface of the display, so that a selective instruction such as an instruction of color conversion and an instruction of an editorial operation can be made." (Kuboki, Figure 15, Columns 15-16, lines 64-2). Furthermore, Kuboki recites that Figure 15 "is a block diagram illustrating the structure of the

digital color copying machine” of the third embodiment in Kuboki’s disclosure. The liquid crystal display of the operation unit 3010 is merely a user interface device for the digital color copying machine, wherein the user may view and change options for print jobs (Kuboki, Columns 15-16, lines 64-8). At most, Kuboki discloses a control unit 3111 which is operated based on an input instruction from the operation unit 3010, and digitizer 3114, wherein the digitizer 3114 is used to input positional information about a region to be subject to the trimming processing, masking processing, and color conversion processing (Kuboki, Column 15, lines 60-64, and Column 16, lines 9-14). However, even if the input positional information is interpreted as suggesting the branched plural-systems image data, there is no disclosure, suggestion, or teaching in Kuboki that this input positional information is supplied to a source driver circuit of the liquid crystal display device of Kuboki as stated in claim 1. Kuboki’s disclosed printing system uses the input positional information transmitted to the digitizer 3114 to perform desired image processing on an image, and does not drive the liquid crystal display device based on the input positional information. (Kuboki, Column 16, lines 22-25).

If the Examiner disagrees, he is requested to point out where in Kuboki the operation of branched plural-systems image data being supplied to a source driver circuit of a liquid crystal display device may be found. However, assuming *arguendo* that Kuboki discloses the above operation, Applicants submit that Kuboki still does not disclose all the features recited in claim 1.

For instance, claim 1 recites that the branched plural-systems image data is supplied to the source driver circuit in synchronization with at least one clock signal having a clock

frequency that is less than half of said original data rate. The Examiner contends that, in Figure 15, Figure 17, and Columns 15-16, lines 50-50 of Kuboki, it is disclosed that the branched plural-systems image data is synchronized with at least one clock signal. Furthermore, the Examiner contends that in Figures 32-34, and in Columns 24-25, lines 44-7, Kuboki discloses that at least one clock signal has a clock frequency that is less than half of the original data rate. Applicants submit that Figures 15 and 17 are directed to the third embodiment in Kuboki and Figures 32-34 are directed to a fourth embodiment in Kuboki. Furthermore, the timing chart in Figure 34 is in accordance with the fourth embodiment, illustrating the signals with respect to a thinning-out circuit 4301 in Figure 1, whereas Figures 15, and 17 are based on a binary- to multi-value conversion unit 802 (Figure 17) in place of the thinning-out circuit 4301 of the fourth embodiment (Kuboki, Figures 31-34, Column 24, lines 37-43). Additionally, in the timing chart illustrated in Figure 16, where VCK is the clock signal for transmitting image data VD, there is no disclosure or suggestion of any relationship of the data rate between the image data and the clock signal.

Therefore, Kuboki does not disclose, teach, or suggest a method of driving a liquid crystal display device comprising, among other things, supplying a source driver circuit with branched plural-systems image data in synchronization with at least one clock signal having a clock frequency that is less than half of said original data rate.

Since “[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference” MPEP 2131 (8th ed., Rev. 3, Aug. 2005), quoting *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628,

631 (Fed. Cir. 1987), and because “[t]he identical invention must be shown in as complete detail as is contained in the . . . claim” MPEP 2131 (8th ed., Rev. 3, Aug. 2005), quoting *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236 (Fed. Cir. 1989), Applicants submit that claim 1 is not unpatentable under 35 U.S.C. § 102(b) over Kuboki and request the Examiner to withdraw the rejection.

Claims 2-8

Since claims 2-8 depend upon claim 1 which has been shown to contain patentable subject matter above, Applicants submit claims 2-8 are patentable at least by virtue of their dependency.

Claim 9

Applicants submit claim 9 is patentable over Kuboki. For example, as discussed above with respect to claim 1, Kuboki does not disclose, teach or suggest a plurality of source driver circuits for incorporating image data in synchronization with at least one clock signal, wherein the plural systems may have a converted data rate that is equal to either said original data rate or a half of said original data rate as stated in claim 9. The Examiner contends that Kuboki, in Figures 15, 17, 32-34, and Columns 15-18, lines 50-50, and Columns 24-25, lines 44-7, discloses these features.

The cited Figures by the Examiner again attempt to combine two different embodiments of Kuboki, since Figures 32-34 are directed to the fourth embodiment in Kuboki’s disclosure which comprises a thinning-out circuit 4301 (Figure 31), and Figures 15, and 17 are directed to the third embodiment of the cited reference which comprise a binary-to-multi-value conversion

unit 802 (Figure 17). Furthermore, in the timing chart illustrated in Figure 16, where VCK is the clock signal for transmitting image data VD_i, there is no disclosure or suggestion of any relationship of the data rate between the image data and the clock signal.

In light of the above discussion, since Kuboki does not disclose all the features as stated in claim 9, Applicants submit claim 9 contains patentable subject matter and respectfully request the Examiner to withdraw his 35 U.S.C. § 102(b) rejection.

Claims 10-23, and 39

Since claims 10-23, and 39 depend upon claim 9 which has been shown to contain patentable subject matter above, Applicants submit claims 10-23, and 39 are patentable at least by virtue of their dependency.

Conclusion

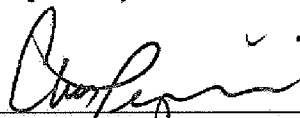
In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

RESPONSE UNDER 37 CFR §1.116
Application No. 10/026,688

Docket No. Q67203

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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